

REMARKS

The Office Action dated July 21, 2005 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response to the Office Action.

Claims 1, 14 and 26 are amended to particularly point out and distinctly claim the subject matter of the invention. Support for the amendments is found at least in paragraphs [0048] – [0050] of the specification. Claims 2-4 are amended to correct informalities. No new matter is added.

Applicants are grateful for the courtesies that were extended to the Applicants' representatives during the personal interview conducted on October 14, 2005. Applicant's summary of the personal interview is included in the following remarks. As stated during the personal interview, the cited references taken individually or in combination fail to disclose or suggest all of the features recited in any of the pending claims. Claims 1-27 are respectfully submitted for consideration.

The Office Action objected to claims 2-4 because of informalities. Applicants submit that that claims 2-4 are amended as suggested in the Office Action. Accordingly, withdrawal of the objection to claims 2-4 is respectfully requested.

The Office Action rejected claims 1-3.6-7, 9, 14, 17, 18, 26 and 27 under 35 U.S.C. 103(a) as being obvious over US Publication No. 2002/0082012 A1 to Wang et al. (Wang), in view of US Publication No. 2003/0157934 A1 to Liang (Liang). The Office Action took the position that Wang disclosed all of the features recited in the above

claims except the feature of measuring a delay of a handover procedure and setting the handover parameter based on the result of the measurement step. The Office Action alleges that Liang discloses this feature. Applicants submit the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the any of the pending claims.

Claim 1, from which claims 2-13 depend, recites a method of selecting a handover parameter in a cellular network. The method includes selecting the handover parameter from a plurality of handover parameters. The method further includes measuring a delay of a handover procedure. Further, the method includes setting said selected handover parameter based on the result of said measured delay.

Claim 14, from which claims 15-23 depend, recites a network device for selecting a handover parameter in a cellular network. The device includes selecting means for selecting the handover parameter from a plurality of handover parameters. The device further includes measuring means for measuring a delay of a handover procedure. Further, the method includes setting means for setting said selected handover parameter in response to said measured delay.

Claim 26, from which claim 27 depends, recites a network device for selecting a handover parameter in a cellular network. The network device includes a selector unit for selecting the handover parameter from a plurality of handover parameters. The device further includes a measuring unit for measuring a delay of a handover procedure.

Further, the device includes a selection unit for setting said selected handover parameter in response to said measured delay.

As discussed during the interview, the present invention selects a parameter from a plurality of parameters and adjusts the selected parameter based on measured handover delay.

Applicants submit that the cited references taken individually or in combination fail to disclose or suggest all of the features recited in any of the pending claims. Specifically, Applicants submit that Liang does not cure the deficiencies of Wang.

Wang is directed to adaptively selecting a handoff communication system. Values of thresholds are used in a determination of whether to request a handoff of communications between serving and target based stations of a communications system. See paragraph [0013]. Wang discloses forming a set of values for a characteristic (hysteresis threshold). The value for the hysteresis threshold is determined according to a mapping of a position at which the mobile station is located and according to mean and standard deviations of measured RF propagation delay (see paragraph [0018]). Signal strength measurements are made by a mobile station of signals generated by a serving base station and potential base stations. When differences between the values of the signals generated and the serving and target base stations exceed initial threshold values, a preliminary indication is made that a handoff should be made.

The Office Action admits that Wang fails to disclose or suggest the feature of measuring a delay of a handover procedure and setting the handover parameter based on

the result of the measurement step, as recited in claim 1 and similarly recited in claims 14 and 26. However, the Office Action alleges that Liang makes up for these deficiencies.

Liang is directed to bandwidth utilization and signal-strength based handover. Liang determines signal strengths received at a mobile device from a present and target base station, determining bandwidth utilization at the base stations and performing handover based on the determined signal strengths and the determined bandwidth utilizations.

Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest at least the feature of selecting a parameter from a plurality of parameters, as recited in claim 1 and similarly recited in claims 14 and 26. As discussed during the interview, Wang merely utilizes one “parameter”, which is the hysteresis threshold, and no other parameters are mentioned, let alone selected. Thus, because there is only one alleged parameter, a selection cannot be made from a plurality of parameters as recited in the pending claims.

Applicants further submit that Liang fails to make up for the admitted deficiencies of Wang. First, Liang does not even mention the selection of a parameter from a plurality of parameters.

Further, Liang does not disclose or suggest the features of measuring a delay of a handover procedure and setting the handover parameter based on the result of said measurement step, as alleged in the Office Action. Liang merely mentions the phrase “handover delay” once in the entire reference at paragraph [0007] as one of several

“service characteristics”, and still does not even mention measuring handover delay or any of the other service characteristics, as recited in the pending claims. Applicants respectfully submit that the Office Action appears to be improperly reading features into the cited references, wherein such features are not even mentioned, let alone disclosed or suggested in the references. The cited portions of Liang in no way, suggests specific characteristics based on the handover parameter, such as the threshold described in Wang. Liang merely indicates that the traditional approach of making handover decisions based on signal strength alone is difficult to employ due to the wide range of service characteristics related to handover, which includes handover delay. Thus, Liang uses bandwidth utilization and signal strength for deciding handover initialization. Therefore, at best, Liang merely discloses an improvement of the invention disclosed in Wang, but does not cure the admitted deficiencies of Wang, as alleged in the Office Action.

Applicants respectfully submit that because claims 2-3, 6, 7, 9, 17, 18 and 27 depend from claims 1, 14 and 26, these claims are allowable at least for the same reasons as claims 1, 14 and 26. Furthermore, the cited prior art fails to disclose or suggest the elements of these dependent claims.

Based at least on the above, Applicants submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims. Accordingly, withdrawal of the rejection of claims 1-3, 6, 7, 9, 14, 17, 18, 26 and 27 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 4 and 15 as being obvious over Wang and Liang, and further in view of US Publication No. 2003/0174733 A1 to Kawai et al. (Kawai). The Office Action took the position that Wang and Liang disclosed all of the features of these claims except for the features of handover delay including round trip delay of a physical layer protocol signaling, a delay between a radio network controlling device and a base station device, a measurement delay at a terminal device and a processing delay of the cellular network. The Office Action alleges that Kawai discloses these features. Applicants submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the above claims. Applicants submit that Wang and Liang are deficient at least for the same reasons discussed above, and Kawai fails to make up for these deficiencies.

Kawai is directed to a packet transmission system. In Kawai, when there is a packet call directed to the mobile node, a transmission system retrieves information as to a connection point of the mobile node from a distribution location information holder of a home agent. Packets are input into a packet distributor situated at the logical location designated by the retrieved connection point information and are then distributed by the distributor to radio transmission devices.

However, Kawai fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Kawai fails to make up for the deficiencies of Wang

and Liang, and therefore fails to disclose or suggest all of the features recited in claim 4 and 15.

Based at least on the above, Applicants submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in claims 4 and 15. Accordingly, withdrawal of the rejection of these claims under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 5 and 16 under 35 U.S.C. 103(a) as being obvious over Wang, Liang and Kawai, in further view of US Publication No. 2003/0224826 A1 Sakata et al. (Sakata). The Office Action took the position that Wang, Liang and Kawai disclosed all of the features recited in these claims except the feature of measuring handover delay including a physical layer protocol and wherein the physical layer protocol includes a radio resource control protocol. The Office Action alleges that Sakata discloses this feature. Applicants submit the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang, Liang and Kawai are deficient at least for the reasons discussed above, and Sakata fails to make up for these deficiencies.

Sakata is directed to a radio network apparatus. In Sakata, a system that is scalable also enables continuous use of U plane control equipment to eliminate the conventional connection path for connecting between RNCs and preventing delay due to passing through the RNCs.

However, Sakata fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Sakata fails to make up for the deficiencies of Wang, Liang and Kawai and therefore fails to disclose or suggest all of the features recited in claims 5 and 16.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claims 5 and 16 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claim 8 under 35 U.S.C. 103(a) as being obvious over Wang and Liang in further view of US Pub. No. 2004/0219919 A1 to Whinnet et al. (Whinnet). The Office Action took the position that Wang and Liang disclosed all of the features recited in claim 8 except the feature of a hysteresis value of approximately 200 ms. The Office Action asserted that Whinnet disclosed this feature. Applicants submit that the cited references taken individually or in combination fail to disclose or suggest all of the features recited in the above claims.

Specifically, applicants submit that Wang and Liang are deficient at least for the same reasons discussed above regarding claim 1 and Whinnet fails to make up for these deficiencies.

Whinnet is directed to management of uplink scheduling modes in a wireless communication system. In Whinnet, transitions between scheduling modes are effected as far as possible using signaling between a wireless communication device and base station, and providing low delay transitions.

However, Whinnet fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Whinnet fails to make up for the deficiencies of Wang and Liang, and therefore, fails to disclose or suggest all of the features recited in claim 8.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claim 8 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 10 and 19 under 35 U.S.C. 103(a) as being obvious over Wang and Liang, and further in view of US Publication No. 2002/0018010 A1 to Le (Le). The Office Action took the position that Wang and Liang disclosed all of the features recited in claims 10 and 19 except the feature of measuring an acknowledged mode round trip delay and estimating a peer-to-peer signaling delay based on the measured roundtrip delay, and asserts that Le disclosed this feature. Applicants respectfully submit that the cited references taken individually or in combination, fail to

disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang and Liang are deficient at least for the reasons discussed above, and Le fails to make up for these deficiencies.

Le is directed to an efficient handover procedure for header compression. The functions of header compression and decompression are relocated. Le further describes a method of communication in a packet network which transmits packets having compressed headers.

However, Le fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Le fails to make up for the deficiencies of Wang and Liang, and therefore, fails to disclose or suggest all of the features recited in claim 10 and 19.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claims 10 and 19 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 12 and 20 under 35 U.S.C. 103(a) as being obvious over Wang and Liang, in further view of US Publication No. 2004/0202119 A1 to Edge (Edge). The Office Action took the position that Wang and Liang disclosed all of the features recited in claims 12 and 20 except for the feature of calculating or deducing the delay from a standard protocol message by using a common time reference,

and asserted that Edge disclosed this feature. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang and Liang are deficient at least for the reasons discussed above regarding claims 1 and 14, and Edge fails to make up for these deficiencies.

Edge is directed to a wireless network for the synchronization of network base stations. In Edge, an absolute transmission timing difference (ATD) is determined for each difference measurement, which are collected and combined for each pair of base stations. A time correction is extracted for each base station from the timing relationship which are used to synchronize the base stations.

However, Applicants submit that Edge fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Edge fails to make up for the deficiencies of Wang and Liang, and therefore fails to disclose or suggest all of the features recited in claims 12 and 20.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claim 12 and 20 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claim 1 under 35 U.S.C. 103(a) as being obvious over Wang, Liang and Le, and further in view of US Patent No. 6,735,436 to McCauley et al. (McCauley). The Office Action took the position that Wang, Liang and McCauley disclosed all of the features recited in the above claims except for the feature of a counting operation for counting time stamps, and asserted that McCauley disclosed this feature. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang, Liang and Le are deficient at least for the reasons discussed above, and McCauley fails to make up for these deficiencies.

McCauley is directed to a system and method for performing interference analysis among cells in a telecommunications network. In McCauley, the accuracy of interference analysis based on traffic disturbance event correlations is estimated, using the probability of false event correlations to confirm that call activity in one or more of the offending cells is likely to be the cause of the interference in a given cell.

However, McCauley fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, McCauley fails to make up for the deficiencies of Wang and Liang, and therefore fails to disclose or suggest all of the features recited in claim 11.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claim 11 under 35 U.S.C. 103(a) is respectfully requested.

Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being obvious over Wang and Liang, in further view of US Patent No. 6,373,834 to Lundh et al. (Lundh), in further view of US Patent No 6,031,832 to Turina (Turina). The Office Action took the position that Wang and Liang disclosed all of the features recited in these claims except for the feature of measuring an uplink delay based on an event report propagation time using time stamps and measuring a downlink delay based on a physical channel reconfiguration message, and asserted that Lundh and Turina respectively, disclose these features. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang and Liang are deficient at least for the reasons discussed above and neither Lundh nor Turina, individually or in combination, makes up for these deficiencies.

Lundh is directed to synchronization for cellular telecommunications network. The synchronization is effected in a cellular network between the master timing unit located at the control node of the network and a slave timing unit located at either the control node or a controlled node.

Turina is directed to a method for improving performance of a network. In Turina the physical channels required for the packet transfers are specially allocated to one mobile station (referred to as a "VIP MS"). The VIP MS has the exclusive priority to use these allocated physical channels for packet data as needed. Consequently, the VIP MS always has the negotiated bandwidth available for the packet transfers. Furthermore, since the VIP MS is given the highest exclusive priority to access these physical channels ("VIP priority"), by allocating a reserved random access channel dedicated to the VIP MS (e.g., on one allocated uplink channel), the variable random access delays experienced by prior systems no longer exist.

However, Applicants respectfully submit that both of Lundh and Turina fail to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Lundh and Turina fail to make up for the deficiencies of Wang and Liang, and therefore fails to disclose or suggest all of the features recited in claims 13 and 22.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claims 13 and 22 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claim 21 under 35 U.S.C. 103(a) as being obvious over Wang, Liang and Edge and further in view of Whinnet. The Office Action took the

position that Wang, Liang and Edge disclosed all of the features recited in the above claims except for the feature of a measuring means arranged to use a common time reference for calculating or deducing the handover delay. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Applicants further submit that Wang, Liang and Edge are deficient at least for the reasons discussed above and Winnet fails to cure these deficiencies.

Winnet is discussed above. However, Winnet fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Winnet fails to make up for the deficiencies of Wang and Liang, and therefore fails to disclose or suggest all of the features recited in claim 21.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claim 21 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claim 23 under 35 U.S.C. 103(a) as being obvious over Wang, Liang and Le and further in view of US Publication No. 2002/0107031 A1 to Syrjarinne et al. (Syrjarinne). The Office Action took the position that Wand, Liang and Le disclosed all of the features recited in these claims except for the feature of a

measuring means that includes a frame counter for keeping a time stamp, and asserted that Syjarinne disclosed this feature. Applicants respectfully submit the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in claim 23. Applicants further submit that Wand, Liang and Le are deficient at least for the same reasons discussed above and Syjarinne fails to cure these deficiencies.

Syjarinne is directed to a system, apparatus and corresponding method for time synchronization, using cellular signal bursts, of for example a global positioning system (GPS) receiver. To synchronize a main module, with access to a clock, to the reference time provided by a cellular communication system via a cellular communication signal, the method includes the steps of: a) having a cellular module respond to the cellular communication signal indicating a time-stamp, by providing a trigger pulse derived from the data component of the cellular communication signal, and also by providing information indicating a time-mark relating the trigger pulse to a universal time; b) having the main module, with access to the clock that provides a signal indicating local time, respond to the information indicating the time-mark; c) communicating the trigger pulse to a timing register coupled to the main module, the communicating being performed via a special hardware path that provides the trigger pulse without substantial random delay; d) having the timing register respond to the signal indicating local time, and also respond to the trigger pulse, by holding information indicating, in local time, when the trigger pulse is received by the timing register; and e) having the main module access the timing register and so obtain the time when the trigger arrives, and further

having the main module determine the difference between when the information indicating the time-mark arrives and when the trigger arrives.

However, Syjarinne fails to mention, disclose or suggest at least the features of selecting the handover parameter from a plurality of handover parameters, measuring a delay of a handover procedure and setting said selected handover parameter based on the result of said measured delay. Thus, Syjarinne fails to make up for the deficiencies of Wang and Liang, and therefore fails to disclose or suggest all of the features recited in claim 23.

Based at least on the above, Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in the above claims. Accordingly, withdrawal of the rejection of claim 23 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 24 and 25 under 35 U.S.C. 103(a) as being obvious over Wang and Liang, and further in view of US Publication No 2004/0053606 to Artamo et al. (Artamo). The Office Action took the position that Wang and Liang disclosed all of the features recited in these claims except for the feature of a network device such as a radio network controller responsible for handover in the cellular system. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the above claims. Applicants further submit that Wang and Liang are deficient at least for the reasons discussed above and Artamo fails to make up for these deficiencies.

Artamo is directed to a method of determining cell allocation for a user in a wireless network, the network having a plurality of cell types and users having at least one of a plurality of service types, including defining a priority table comprising, for each service type, a priority for each cell type.

Because claims 24 and 25 depend from claim 14, these claims are allowable at least for the same reasons as claim 14. Based at least on the above, Applicants submit that he cited references taken individually or in combination fail to disclose or suggest all of the features recited in claims 24 and 25. Accordingly, withdrawal of the rejection of these claims under 35 U.S.C. 103(a) is respectfully requested.

Applicants respectfully submit that each of claims 1-27 recite features that are neither disclosed nor suggested in any of the cited references. Accordingly, Applicants request that each of claims 1-27 be allowed and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
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